December 19, 2003

Mr. J. I. Palmer, Jr., Regional Administrator
USEPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

Dear Mr. Palmer:

As a requirement for continued participation in South Carolina's 8-Hour Ozone Early Action Compact, enclosed you will find the December 2003 Progress Report completed by participating counties and the South Carolina Department of Health and Environmental Control (DHEC). Enclosure 1 includes the report for DHEC and Enclosure 2 includes the report for each participating county, grouped by the following areas:

Appalachian: Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg
Catawba: Chester, Lancaster, Union, York
Pee Dee: Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro
Waccamaw: Georgetown, Horry, Williamsburg
Santee Lynches: Clarendon, Kershaw, Lee, Sumter
Berkeley-Charleston-Dorchester: Berkeley, Charleston, Dorchester
Low Country: Beaufort, Colleton, Hampton, Jasper
Lower Savannah: Aiken, Allendale, Bamberg, Barnwell, Calhoun, Orangeburg
Central Midlands: Fairfield, Lexington, Newberry, Richland
Upper Savannah: Abbeville, Edgefield, Greenwood, Laurens, Saluda

The modeling and emissions inventory components of the early action process remain on schedule. Meetings continue to be held with local stakeholder groups to assist in determining the emission reduction strategies that will be included in the final local Early Action Plans due to EPA in March 2004. DHEC has requested assistance from EPA, Region 4 in determining emission reductions from proposed strategies.

Thank you for the assistance and support EPA has provided in this process. We look forward to continuing to work with EPA as we implement measures to achieve cleaner air sooner for South Carolina and our neighboring states. Should you have questions or desire additional information, please do not hesitate to contact Jim Joy, Chief of DHEC's Bureau of Air Quality at (803) 898-4123 or Henry Phillips of his staff at (803) 898-3260.

Sincerely,

R. Lewis Shaw, P.E.
Deputy Commissioner
Environmental Quality Control

Enclosures: 1. South Carolina DHEC December 2003 Progress Report
2. December 2003 Progress Reports for Participating Local Areas

cc: Kay Prince, EPA Region 4
County Officials (no attachments*)
Ron Methier, GA Dept. of Natural Resources (no attachments*)
Keith Overcash, NC Dept. of Environmental and Natural Resources (no attachments*)
EQC District Directors (no attachments*)

*All those not receiving attachments will be notified when materials are placed on website.

Statewide Initiatives and Emission Reduction Strategies

Early Action Compact Milestone December, 2003
List of Emission Reduction Strategies Under Consideration
Bureau of Air Quality – DHEC
State of South Carolina

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist South Carolina in achieving and/or maintaining the 8-hour ozone standard by 2007 and beyond.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Ozone Forecast/Outreach and Education	The Division of Emissions, Modeling and Support develops a forecast for the 8-hour ozone standard. The forecast is for four areas within South Carolina. These areas include the Upstate, Central Midlands, Central Savannah River and Pee Dee. The Catawba area, including Chester, Lancaster and York counties is included in North Carolina's forecast through a cooperative partnership. A link for the Catawba forecast is included on DHEC's website. This year, 2003, was the first year that South Carolina forecasted for the Pee Dee area. The Division of Air Planning, Development and Outreach is responsible for disseminating the ozone forecast to interested individuals and groups across the state, primarily during the summer months. The forecast serves as a public health advisory to protect those persons who are most at risk to the effects of ozone.	Directionally Sound	Ongoing	Forecast Areas: Upstate area - Anderson, Oconee, Pickens, Greenville, Abbeville, Laurens, Greenwood, Spartanburg, Cherokee, and, Union counties. Central Midlands area – Newberry, Fairfield, Kershaw, Lexington, Richland, Calhoun, Kershaw, and, Sumter. Central Savannah River area – Allendale, Barnwell, Aiken, Saluda, Edgefield, and, McCormick. Pee Dee area – Lee, Darlington, Florence, and, Chesterfield
Support activities implemented by local areas participating in the EAC	SC has been and will continue to work with EPA to assist local areas in determining the emission reduction strategies that will assist the area in achieving emission reductions needed for attaining and maintaining the 8-hour ozone standard within their respective area. The Division of Air Planning, Development and	Directionally Sound	Ongoing	Statewide

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
	Outreach continues to develop a Resource Guide for Air Quality Improvement that contains useful information to assist counties in planning for cleaner air sooner. This guide is a work-in-progress in which DHEC will continue to search for new information and ask that any information gathered and/or found by counties be shared so that it can be added and used for the benefit of everyone. This guide consists of informational text, pamphlets, hand-outs, useful websites, and other resources that will serve as a tool for county planning. Fact sheets have either been developed or revised to assist with understanding ozone, ozone monitoring and the ozone design value. Copies of these fact sheets were included in the June 2003 submittal. Forms for the milestones have been developed by the Division and provided to the participating areas to assist with the reporting aspect of the EAC. These forms were approved by EPA and were shared with other states involved in the EAP process.			
Open Burning	Revise the existing state regulation (R.61-62.2, Prohibition of Open Burning) to reduce statewide NOx/PM/CO emissions. The DHEC Board granted initial approval of the proposed regulation on October 9, 2003. An informational forum was held on November 24, 2003. Final approval by the DHEC Board will be requested January 8, 2004, for submittal to the state legislature.	Currently Evaluating	Promulgation should occur by June 2004. Implementation expected by 2005.	Statewide
South Carolina NOx Control Regulation	This proposed regulation is designed to help control the growth of NOx emissions statewide and focuses on sources currently not subject to NOx control requirements. This proposed regulation would apply to new NOx sources but would exempt units that are regulated by other NOx regulations with equivalent requirements. The DHEC Board granted initial approval of the proposed regulation on October 9, 2003. An informational forum was held on November 24, 2003.	Currently Evaluating (See Attachment 1)	Promulgation should occur by June 2004. Implementation expected by 2005.	Statewide

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
	Final approval by the DHEC Board will be requested January 8, 2004, for submittal to the state legislature.			
CAIGE	Develop, implement and market a plan for reducing ground-level ozone precursors by state government.	Voluntary efforts Directionally Sound	April 2005	Statewide
Smart Highways	A plan to ensure transportation plans, programs and projects consider statewide and local air quality goals. Certain aspects of the Transportation Conformity regulations may be incorporated into such a plan.	Not applicable		Statewide
Initiative to reduce NOx emissions from large facilities within South Carolina	Staff within the Bureau of Air Quality, have met with some of the "larger" facilities in South Carolina to negotiate NOx emissions through the permitting process. Those reductions will be made available once they are finalized.	Currently Evaluating	April 2005	Statewide
Tier 2 standards	Federal emission standard for passenger cars, light trucks, and larger passenger vehicles. Program designed to focus on reducing the emissions most responsible for the ozone and particulate matter impact from these vehicles, including NOx and VOCs.	Currently Evaluating (See Attachment 2)	Phase in period 2004-2007	Statewide
Low Sulfur	Program to reduce average gasoline sulfur levels nationwide	Currently Evaluating (See Attachment 2)	Phase in period 2004-2007	Statewide
NOx SIP Call	Federal Rule calling for SIP revision that requires sources in 17 states, including South Carolina to reduce summertime NOx emissions.	18 percent reduction in NOx (See Attachment 2)	2004	Statewide

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Estimated Reductions Achieved by NOx Control Standards from Uncontrolled Levels

Source Type	Control Technology and/or Emission Limit	Percent Reduction from Uncontrolled
Boilers and Water Heaters		
Natural Gas Fired Boilers		
≥10mmBTU/hr and < 100mmBTU/hr	Low NOx Burners or equivalent technology capable of achieving 30ppmv @ 3% O2 Dry (0.036 lb/mmBTU)	50%[1]
≥100mmBTU/hr	Low NOx Burners + Flue Gas Recirculation or equivalent technology capable of achieving 30 ppmv @ 3% O2 Dry (0.036 lb/mmBTU)	50- 60%[1]
Distillate Oil Fired Boilers		
≥10mmBTU/hr and < 100mmBTU/hr	Low NOx Burners or equivalent technology capable of achieving 0.15 lb/mmBTU	50%[1]
≥100mmBTU/hr	Low NOx Burners + Flue Gas technology capable of achieving 0.14 Recirculation or equivalent lb/mmBTU	60%[1]
Residual Oil Fired Boilers		
≥10mmBTU/hr and < 100mmBTU/hr	Low NOx Burners or equivalent technology capable of achieving 0.3 lb/mmBTU	50%[1]
≥100mmBTU/hr	Low NOx Burners + Flue Gas Recirculation or equivalent technology capable of achieving 0.3 lb/mmBTU	60%[1]

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Multiple Fuel Boilers	The emission limits for boilers burning multiple fuels are calculated in accordance with the formulas below. Additional fuels shall be addressed on a case-by-case basis.	
≥10mmBTU/hr and < 100mmBTU/hr	$E_n = [(0.036 \text{ lb/mmBTU } H_{np}) + (0.15 \text{ lb/mmBTU } H_{do}) + (0.3 \text{ lb/mmBTU } H_{ro}) + (0.35 \text{ lb/mmBTU } H_c) + (0.2 \text{ lb/mmBTU } H_w)]/(H_{np} + H_{do} + H_{ro} + H_c + H_w)$ where: E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu) H_{np} is the heat input from combustion of natural gas, H_{do} is the heat input from combustion of distillate oil H_{ro} is the heat input from combustion of residual oil, H_c is the heat input from combustion of coal, H_w is the heat input from combustion of wood residue.	≈50%[1]
≥100mmBTU/hr	$E_n = [(0.036 \text{ lb/mmBTU } H_{np}) + (0.14 \text{ lb/mmBTU } H_{do}) + (0.3 \text{ lb/mmBTU } H_{ro}) + (0.25 \text{ lb/mmBTU } H_c) + (0.2 \text{ lb/mmBTU } H_w)]/(H_{np} + H_{do} + H_{ro} + H_c + H_w)$ where: E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu) H_{np} is the heat input from combustion of natural gas, H_{do} is the heat input from combustion of distillate oil H_{ro} is the heat input from combustion of residual oil, H_c is the heat input from combustion of coal. H_w is the heat input from combustion of wood residue.	≈60%[1]
Wood Residue Boilers		
All types	Combustion controls to minimize NOx emissions or equivalent technology capable of achieving 0.20 lb/mmBTU	0-50%[2]
Coal Fired Stoker Fed Boilers		
< 250 mmBTU/hr	Combustion controls to minimize NOx emissions or equivalent technology capable of achieving 0.35 lb/mmBTU	34%[3]

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

≥ 250 mmBTU/hr	Combustion controls to minimize NOx emissions or equivalent technology capable of achieving 0.25 lb/mmBTU	53%[3]
Pulverized Coal Fired Boilers		
< 250 mmBTU/hr	Low NOx Burners + Combustion controls to minimize NOx emissions or equivalent technology capable of achieving 0.35 lb/mmBTU	50%[1]
≥ 250 mmBTU/hr	Low NOx Burners + Combustion controls to minimize NOx emissions + SCR or equivalent technology capable of achieving 0.14 lb/mmBTU	70%+[1]
Municipal refuse fired boilers		
< 250 mmBTU/hr	Combustion modifications to minimize NOx emissions + Flue Gas Recirculation or equivalent technology capable of achieving 200 ppmv @12% CO_2 (0.35 lb/mmBTU)	12%[3]
≥ 250 mmBTU/hr	Staged Combustion and Automatic Combustion Air Control + SCR or equivalent technology capable of achieving 0.18 lb/mmBTU	55%[3]
Internal Combustion Engines		
Compression Ignition	Timing Retard ≤ 4^o + Turbocharger w/ Intercooler or equivalent technology capable of achieving 490 ppmv @ 15% O_2 (7.64 gm/bhp-hr)	20-30%[1]
Spark Ignition	Lean Burn Technology or equivalent technology capable of achieving 1.0 gm/bhp-hr	87%[1]
Landfill or Digester Gas Fired	Lean Burn Technology or equivalent technology capable of achieving 1.25 gm/bhp-hr	≈50%[EST]

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Gas Turbines		
Simple Cycle – Natural Gas		
< 50 Megawatts	Combustion Modifications (e.g. dry low-NOx combustors) to minimize NOx emissions or equivalent technology capable of achieving 25 ppmv @ 15% O_2 Dry (0.054 lb/mmBTU)	81%[4]
≥ 50 Megawatts	Combustion Modifications (e.g. dry low-NOx combustors) to minimize NOx emissions or equivalent technology capable of achieving 9.0 ppmv @ 15% O_2 Dry (0.033 lb/mmBTU)	84%[1]
Combined Cycle – Natural Gas		
< 50 Megawatts	Dry Low-NOx Combustors or equivalent technology capable of achieving 9.0 ppmv @ 15% O_2 Dry (0.033 lb/mmBTU)	84%[1]
≥ 50 Megawatts	Dry Low-NOx Combustors + SCR or equivalent technology Capable of achieving 3.0 ppmv @ 15% O_2 Dry (0.011lb/mmBTU)	94%[1]
Simple Cycle - Distillate oil combustion		
< 50 Megawatts	Combustion Modifications and water injection to minimize NOx emissions or equivalent technology capable of achieving 42 ppmv @ 15% O_2 Dry Basis (0.16 lb/mmBTU)	68%[1]
≥ 50 Megawatts	Combustion Modifications and water injection to minimize NOx emissions or equivalent technology capable of achieving 42 ppmv @ 15% O_2 Dry Basis (0.16 lb/mmBTU)	68%[1]
Combined Cycle - Distillate oil combustion		
< 50 Megawatts	Dry Low-NOx Combustors with water injection, or equivalent technology capable of achieving 42 ppmv @ 15% O_2 Dry Basis (0.16 lb/mmBTU)	68%[1]

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

≥ 50 Megawatts	Dry Low-NOx Combustors, water injection, and SCR or Equivalent technology capable of achieving 10.0 ppmv @ 15% O_2 Dry Basis (0.038 lb/mmBTU)	90%[1]
Landfill Gas Fired	Water or steam injection or low NOx turbine design or equivalent technology capable of achieving 25 ppmv @ 15% O_2 (0.097 lb/mmBTU)	48%[4]
Cement Kilns		
All	Low NOx Burner or equivalent technology capable of achieving a 30% reduction from uncontrolled levels	30%
Fluidized Bed Combustion (FBC) Boiler:		
Coal Fired	SNCR- Urea (Selective Noncatalytic Reduction - Urea) capable of achieving 0.07 lbs/mmBTU (51.8 ppm @ 3% oxygen)	75%[1]
Wood Fired	SNCR- Urea (Selective Noncatalytic Reduction - Urea) capable of achieving 0.07 lbs/mmBTU (51.8 ppm @ 3% oxygen)	55%[1]
Recovery Furnaces		
All	4th level or air to recovery furnace/good combustion practices or equivalent technology capable of achieving 100 ppm @8% oxygen	0-30%[5]
Lime Kilns		
All	Combustion controls or equivalent technology capable of achieving 175 ppm @ 10% oxygen	25%[3]
Fuel Combustion Sources Not Otherwise Specified: (Examples include but are not limited to process heaters, dryers, furnaces, ovens, duct burners, incinerators, and smelters)		

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

All	Low NOx Burners or equivalent technology capable of achieving 30 ppmv @ 3% O_2 Dry (0.036 lb/mmBTU)	0-60%[1]

[1] – EPA 456/F-99-066R "EPA Technical Bulletin – Nitrogen Oxides (NO_x), Why & How thet are Controlled", Nov. 1999.
[2] – EPA 453/R-94-022 "Alternative Control Techniques Document – NO_x Emissions from Industrial/Commercial/ Institutional Boilers", March 1994
[3] – Compared with emissions from EPA's AP-42 "Compilation of Air Pollutant Emission Factors"
[4] – EPA's "Emission Factor Documentation for AP-42 Section 3.1 Stationary Gas Turbines", April 2000
[5] - Information found on EPA's RACT/BACT/LAER Clearinghouse plus information found in the Willamette PSD permit review (SC).

Utility Reductions from EGUs in the NOx SIP Call

Utility	*1998 Emissions*[1] **(tons/day)**	*2007 Emissions* **(tons/day)**	*2012 Emissions* **(tons/day)**
Progress Energy	13.76	30.97	30.97
SCE&G	147.8	84.06	84.06
Santee Cooper	151.65	21.34	30.97
Duke Power	17.21	13.70	13.70
Total	330.42 tons/day	150.07	159.70
Reduction from 1998 Levels	-	54.6%	51.7%

[1]- Emission data represents modeling episode only.

Note: Data is for the EGU units under the NOx Trading Program Only.

Reductions from Tier II and Low Sulfur Fuel Regulatory Changes

(For May 1998 Episode & Future Years Using Mobile6 Model)

Year	Mobile On-Road Emissions (tons/day)	% Reduction from 1998 Levels
1998	345	-
2007	153	55.6%
2010	128	62.9%
2012	116	66.3%

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

These are the Draft Plans of Emission Reduction Strategies for the Upper Savannah Region submitted for the December 10, 2003 Early Action Compact Milestone.

Early Action Compact Milestone - December 2003
List of Emission Reduction Strategies Under Consideration

Abbeville County

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist Abbeville County in achieving and/or maintaining the 8-hour ozone standard by 2007 and beyond.

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Work with local media for public awareness	• PSA's to local newspapers, radio and television stations		On-going	Countywide
Open burning on high ozone days	• Solicit cooperation of State and Federal		On-going	Countywide
Mowing	• Encourage County, municipalities and citizens not to mow during high ozone days		On-going	Countywide
Vehicles	• Encourage County and municipalities to practice not idling government vehicles when practical. • Fill automobiles with gave after 6 p.m. when possible • Consider alternate schedule for County and Municipal Services • County and Municipalities will explore purchasing more fuel efficient and low emission level vehicles when replacements are needed when economically feasible.		Ongoing	Countywide
Education	• Work cooperatively with School District		Ongoing	Countywide

Early Action Compact Milestone - December 2003
List of Emission Reduction Strategies under Consideration

Edgefield County

According to the latest 8-hour ozone monitoring data, Edgefield County should remain attainment for the 8-hour ozone standard. However, in an effort to assist other areas in South Carolina and in the interest of public health and the environment, in December 2002, Edgefield County agreed to participate in the 8-hour ozone early action process. Therefore, based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. Edgefield County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	Guy Mueller: 129 Courthouse Square Suite 104 Edgefield S.C. 29824 803-637-4073 Email: gmueller@edgefieldcounty.sc.gov	Working with BP Amoco Oil (Sweetwater Terminal) Directionally sound	Ongoing	County Wide
Support State-wide efforts	Edgefield County will support the efforts of SC DHEC regarding state-wide	Directionally sound	Ongoing	County Wide
Edgefield County Road Maintenance Department	Edgefield County Road Maintenance Dept. will consider clean air goals in purchasing of new equipment	Directionally sound	Ongoing	County Wide
Edgefield County Fleet	Edgefield County Fleet will consider air quality goals on the purchase of fleet vehicles	Directionally sound	Ongoing	County Wide
Edgefield County Building & Planning Department	Edgefield County Building & Planning Dept. will use energy efficient strategies in inspections of residential dwellings and commercial buildings	Directionally Sound	Ongoing	County Wide

Early Action Compact Milestone – December 2003
List of Emission Reduction Strategies Under Consideration

Greenwood County

According to the latest 8-hour ozone monitoring data, Greenwood County should remain in attainment for the 8-hour ozone standard. However, in an effort to assist other areas in South Carolina and in the interest of public health and the environment, in December 2002, Greenwood County agreed to participate in the 8-hour ozone early action process. Therefore, based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. Greenwood County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.

Emission Reduction Strategy Under Consideration	Description of Implementation Item	Current Assessment of Emission Reductions
Land Use - Mixed-Use Development		
Goal - "The location of stores, restaurants, offices, schools, recreation and jobs within close proximity of residential"		
Allow Mixed-Use Developments	Revise Development Standards to Allow Mixtures of Land Uses in Zoning Districts	N/A
Develop Incentives for Mixed-Use Developments	Revise Development Standards to Provide Incentives for Mixed-Use Developments	N/A
Encourage Home Occupations	Revise Development Standards to Encourage Home Occupations	N/A
Encourage Housing in/near Large-Scale Commercial Developments	Revise Development Standards to Encourage Housing Near Service Areas	N/A
Encourage Incentives for the Inclusion of Pedestrian and Bike Paths	Revise Development Standards to Include Incentives for Alternative Modes of Transportation	N/A
Benefits to Reduce Ozone		
-- Lessens Vehicle Trips		
-- Encourages Alternative Modes of Travel		
-- Promotes Bicycle and Pedestrian Travel that Could Replace 18 to 25% of Vehicle Trips		
-- Reduces Energy Consumption by up to 30% if 1 in 10 trips for Shopping or Personal Business was Made on Foot		
-- Savings of 50% of Auto-Related Energy can be Realized when New Residential Developments include Higher Density Housing		
Land Use - Compact Development and Clustering		

Goal - "To concentrate development, thus reducing the ambient air quality from impervious surfaces and shorter vehicle trips"		
Allow Compact Development and Clustering	Revise Development Standards to Allow Developers Incentives to Cluster Residential Units Together	N/A
Provide Tax Incentives/Fee Reductions for Compact and Cluster Projects	Revise Development Standards to Provide Reductions in Fees for Cluster Projects	N/A
Benefits to Reduce Ozone		
-- Shortens Vehicle Trips -- Reduce Summer Air Temperatures by Reduced Impervious Surfaces -- Provides Efficient Use of Public Services in a Small Geographic Area -- Reduces Vehicle Miles Traveled by 25 to 30% when Density is Doubled		
Transportation - Street and Parking Design		
Goal - "Provide Energy-Efficient Standards for Road Design and Layout, Construction Techniques and Materials, Traffic Optimization and Parking Desi		
Develop Provisions for Safe and Convenient Pedestrian and Bicycle Travel	Develop Sidewalk and Pedestrian Plan Which Outlines Proposed Alternatives to Alternative Travel	N/A
Continue to Upgrade Traffic Signal Optimization Measures	Assist SC DOT to Upgrade Traffic Signals for Travel Efficiency	N/A
Evaluate Street Design Standards to Promote Energy Efficiency	Revise Development Standards to Include Design Standards that Promote Energy Efficiency	N/A
Benefits to Reduce Ozone		
-- Encourages Alternative Modes of Travel -- Optimizes Travel -- Shortens Vehicle Trips by Providing Shorter and More Direct Routes -- Reduces Vehicle Miles Traveled by up to 60% When Traditional Street Networks are Used -- Reduces Vehicle Speeds by Utilizing Appropriate Sizing and Design of Streets -- Reduces Ambient Air Temperatures Through Reduced Impervious Surfaces -- Reduces Traffic Congestion and Fuel Consumption by up to 19%		
Transportation - Multi-Modalism		
Goal - "Individual Transportation Modes Working Together to Provide Alternatives such as Mass Transit, Rail, Bicycle, or Pedestrian Travel"		
Encourage Alternative Modes of Transportation in New Developments	Revise Development Standards to Encourage Sidewalks, Bike Trails, etc. in Developments	N/A
Provide for Pedestrian and Bicycle Paths in New Developments	Revise Development Standards to Encourage Sidewalks, Bike Trails, etc. in Developments	N/A
Encourage New Development to Connect Transportation Facilities Together	Revise Development Standards to Connect Developments Together to Promote Transportation Linkages	N/A
Benefits to Reduce Ozone		
-- Provides Alternatives to Vehicle Trips		

-- Eliminates up to 3% of all Personal Vehicle Trips and Reduces Fuel Use by More Than 1% if Trips 5 Miles or Less Were Made by Bike or on Foot
-- Reduces Total Vehicle Trips From 2 to 5% if 20 to 50% of Trips Less than 1/2 Mile Were Made on Foot or by Bicycle

Emission Reduction Strategy Under Consideration	Description of Implementation Item	Estimate of Emission Reductions (if available)
Transportation - Travel Alternatives		
Goal - "Reduce Vehicular Traffic and Conserve Energy through the Use of Advanced Technology and Workplace Practices"		
Encourage Telecommuting and Home Occupations	Revise Development Standards to Encourage Individuals to Work From Home	N/A
Develop Partnerships for the Enhanced Usage of Teleconferencing Facilities	Develop a Feasibility Study for Local Organizations to Develop Teleconferencing Facilities	N/A
Benefits to Reduce Ozone		
-- Reduces One Round Vehicle Trip for Each Day a Worker Telecommutes -- Removes Extended Vehicle Trips for Meetings and Training Held at Local Teleconferencing Facilities		
Environmental - Alternative Fuels		
Goal - "Reduce Traditional Gasoline and Diesel Fuel Usage Through Alternative Methods"		
Educate the Public on Availability and Benefits of Alternative Fuels	Develop Public Meetings, Ads, Brochures to Address the Educational Needs of the Local Community	N/A
Promote the Usage of Alternative Fuels by Local Governments and Agencies	Develop an Alternative Fuel Fleet Program that Analyzes and Promotes Fuel Efficiency	N/A
Incorporate the Use of Alternative Fuels into Local Government Operations	Develop a Fuel Efficiency Program that Evaluates the Benefits of the Use of Alternative Fuels	N/A
Benefits to Reduce Ozone		
-- Reduces Impacts to the Environment		
Community Facilities - Administration, Policies and Education		
Goal - "To Serve as a Community Example Through Management, Procedures and Training"		
Continue to Enforce Speed Limits	Assist City, County and SCHP in the Enforcement of Local Speed Limits	N/A
Develop a Comprehensive Energy Conservation Program (CECP)	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Expand and Promote Teleconferencing Facilities	Develop a Feasibility Study for Local Organizations to Develop Teleconferencing Facilities	N/A
Promote the Use of Alternative Modes of Travel by Employees	Develop Public Meetings, Ads, Brochures to Address the Educational Needs of the Local Community	N/A
Benefits to Reduce Ozone		
-- Reduces Energy Costs by as Much as 15% Without Affecting the Level of Service		

-- Reduces Energy Waste and Promotes Conservation through Employee Education		
-- Reduces Vehicle Trips by Alternative Modes of Travel, Carpooling, Telecommuting, and Teleconferencing		
Community Facilities - Site Location		
Goal - "The Selection of Sites for New Community Facilities Based on Energy Objectives"		
Locate New Facilities Near Transit, Bicycle and Pedestrian Facilities	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Locate New Facilities Near Mixed-Use Developments	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Work with School Districts and Other Govt Organizations in Site Selection	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Benefits to Reduce Ozone		
-- Provides Alternatives to Vehicle Trips		
-- Reduces Vehicle Traffic When Similar Uses are Located Together and Within Adequate Walking Distance		
-- Reduces Vehicle Trips When Additional Uses are Clustered Together Within Close Proximity		
Community Facilities - Fleet Efficiency		
Goal - "To Optimize Fleet Vehicles (Equipment, Systems, Maintenance and Management Procedures) Based on Energy Standards"		
Replace Older Vehicles with More Energy-Efficient Models	Develop an Alternative Fuel Fleet Program that Analyzes and Promotes Fuel Efficiency	N/A
Provide Regular Maintenance for Vehicles	Develop a Fuel Efficiency Program	N/A
Assign Vehicles Appropriate to the Task	Develop a Fuel Efficiency Program	N/A
Train Maintenance Staff in Procedures that Will Save Energy	Develop a Fuel Efficiency Program	N/A
Train Personnel in Fuel Efficient Driving Techniques	Develop a Fuel Efficiency Program	N/A
Incorporate the Use of Alternative Fuels Within the Fleet System	Develop an Alternative Fuel Fleet Program that Analyzes and Promotes Fuel Efficiency	N/A
Benefits to Reduce Ozone		
-- Increases Fuel Efficiency Through Operation Procedures and Practices		
-- Improves Fuel Economy From 1 to 5% Through Regular Maintenance		
-- Increases Energy Savings Over Time Through the Replacement of Older Vehicles and Assigning Vehicles to the Correct Purpose		
Emission Reduction Strategy Under Consideration	**Description of Implementation Item**	**Estimate of Emission Reductions (if available)**
Economic Development - Revitalization and Infill		
Goal - "To Reduce Energy Costs through the Use of Existing Properties in Close Proximity to Existing Infrastructure"		
Encourage Economic Development Efforts to Reuse Existing Properties	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Develop Database on Vacant, Underutilized Properties	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Develop Incentives for the Reuse or Infill of Existing Properties	Develop CECP to Evaluate Energy Conservation Programs for Implementation	N/A
Benefits to Reduce Ozone		
-- Provides Alternatives to Vehicle Trips		

-- Reduces Vehicle Traffic When Similar Uses are Located Together and Within Adequate Walking Distance
-- Reduces Vehicle Trips When Additional Uses are Clustered Together Within Close Proximity

Community - Planning Programs		
Goal - "To Identify Programs and Actions that Can Reduce Ozone Production and Minimize the Associated Hazards"		
Develop Seasonal Ozone Awareness Program (SOAP) including: Promotion of Employee Education and Action Development of Educational Materials/Brochures for Disbursement Public Service Announcements Notification of Health Warnings Notification of Open Burning Bans Notification of Small Engine/Lawn Mower Warnings Notification of Engine Idling Warning s Promotion of Ozone Awareness Through Public Presentations	Develop SOAP	N/A
Develop Ozone Reduction Action Plan (ORAP) including: Appointment of Ozone Action Coordinator Idling Restrictions Lawn Mower/Small Engine Restrictions Postpone Refueling to Evening Hours Transition to Alternative Work Schedules and Flexible Lunch Hours	Develop ORAP	N/A
Develop an Energy Element to the Comprehensive Plan	Develop Energy Element that Outlines the Energy Usage throughout the County and Plans for the Future Needs of the County's Energy Demand	N/A
Benefits to Reduce Ozone		
-- Assists EPA and SCDHEC in Public Notifications and Education -- Reduces Greenwood County's Impacts on the Environment		

Laurens County

According to the latest 8-hour ozone monitoring data, Laurens County should remain attainment for the 8-hour ozone standard. However, in an effort to assist other areas in South Carolina and in the interest of public health and the environment, in December 2002, Laurens County agreed to participate in the 8-hour ozone early action process. Therefore, based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. Laurens County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	Scott Holland, Dir. Of Public Works is identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education outreach and dissemination of ozone forecast.	N/A	March 2003	County wide
Support state-wide efforts	Laurens County will support the efforts of SC DHEC regarding state-wide emission reduction strategies.	N/A	March 2003	County wide
Reduce motorized activities	Laurens County will delay or reschedule mowing and motorized construction and maintenance activities on Ozone Action Days where practical.	N/A	July 2003	County wide
Restrict Painting Activities	Laurens County will restrict indoor and outdoor painting activities on Ozone Action Day where practical.	N/A	July 2003	County wide
Commuter Actions	Laurens County will encourage ridesharing for all employees in the performance of their duties where practical.	N/A	July 2003	County wide

SALUDA

According to the latest 8-hour ozone monitoring data, Saluda County should remain attainment for the 8-hour ozone standard. However, in an effort to assist other areas in South Carolina and in the interest of public health and the environment, in December 2002, Saluda County agreed to participate in the 8-hour ozone early action process. Therefore, based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. Saluda County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	One person will be identified as the Air Quality Contact. At a minimum this contact will be responsible for ozone Education/outreach and dissemination of ozone forecast	N/A	April 2005	County wide
Support statewide efforts	Saluda County will support the efforts of SC DHEC Regarding state-wide emission reduction strategies	N/A	April 2005	County wide